disposed in Seattle, Washington (seattle/domain.com), Primary EDNS and Primary DNS servers 152 are included in the same system. Also, Primary EDNS and Primary DNS servers 154 are included in the data center 138 located in New York, New York (newyork/domain.com). Both of these Primary DNS servers are authoritative sources for zone information that is used to resolve the client's domain name request. Each Primary EDNS system uses its separately collected metric information to perform the selected load balancing method and determine (resolve) an ip address for the client to optimally access resources associated with the requested domain name. Additionally, only one Host machine 120 is shown disposed at the data center 118 located in Tokyo, Japan (tokyo/domain.com).

Claims:

Please amend Claims 1, 13 and 37 as follows:

1. Method for balancing a load on a plurality of servers that provide access to resources associated with a domain name, comprising:

(a) receiving a request for access to resources associated with the domain name;

(b) determining the load out of band for each of a plurality of servers that provide access to resources associated with the domain name and selecting one of the plurality of servers to provide the access, the selection of the server being based on a determination for optimally balancing the load on the plurality of servers; and

(c) resolving an Internet protocol (ip) address of the selected server so that the accessing of resources associated with the domain name at the resolved ip address of the selected server will cause the load to be optimally balanced on the plurality of servers on a network.

13. The method of Claim 7, further comprising a plurality of EDNSs that are separately disposed at a plurality of geographically distributed data centers, each data center including at least one of a server array controller, host machine and EDNS.

37. A system for balancing a load on a plurality of servers that provide access to resources associated with a domain name, comprising:

(a) a memory for storing logical instructions; and

(b) a processor for executing the logical instructions stored in the memory, the execution of the logical instructions causing functions to be performed, including:

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(i) receiving a request for access to resources associated with the domain name;

(ii) determining the load out of band for each of a plurality of servers that provide access to resources associated with the domain name and selecting one of the plurality of servers to provide the access, the selection of the server being based on a determination for optimally balancing the load on the plurality of servers; and

(iii) resolving an Internet protocol (ip) address of the selected server so that the accessing of resources associated with the domain name at the resolved ip address of the selected server will cause the load to be optimally balanced on the plurality of servers on a network.

Please add new Claims 40-60 as follows:

--40. An apparatus for balancing a load on a plurality of virtual servers that provide access to a resource associated with a domain name, comprising:

(a) a memory for storing logical instructions;

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(b) a transceiver for communicating over a network;

(c) a processor for executing the logical instructions stored in the memory, the execution of the logical instructions causing actions to be performed, including:

(i) receiving a request from a client for access to a resource associated with the domain name;

(ii) determining the load for each of a plurality of virtual servers that provide access to the resource associated with the domain name and selecting one of the plurality of virtual servers to provide the access, the selection of the virtual server being based on a determination for balancing the load on the plurality of virtual servers, wherein at least one of the plurality of virtual servers is disposed in a geographic area that is separate from another geographic area where at least one other of the plurality of virtual servers is disposed; and

(iii) resolving an Internet protocol (IP) address of the selected virtual server, wherein a subsequent accessing of the resource associated with the domain name at the resolved IP address of the selected virtual server by the client will cause the load to be balanced on the plurality of virtual servers.

41. The apparatus of Claim 40, wherein the plurality of virtual servers are generated by at least one server array controller, and wherein at least a portion of at least one node server is employed by each server array controller to generate each virtual server.

42. The apparatus of Claim 40, wherein at least one of the plurality of virtual servers is disposed in one geographic area and at least another of the plurality of virtual servers is disposed in another geographic area.

43. The apparatus of Claim 40, wherein determining the load for each virtual server, further comprises collecting metric information out of band regarding each virtual server, and wherein the metric information is employed to determine at least a portion of the balancing of the load for the plurality of the virtual servers in advance of receiving the request.

44. The apparatus of Claim 40, wherein the load balancing of the plurality of virtual servers, further comprises enabling at least one geographic based load balancing determination, including hop count, network topology, and global availability.

45. The apparatus of Claim 40, wherein the performed actions further comprise enabling an agent to communicate metric information regarding at least one of a server, virtual server, and a server array controller to at least one of another server array controller, a primary EDNS, and a secondary EDNS.

46. The apparatus of Claim 40, wherein the performed actions further comprise enabling a UDP based protocol for communicating metric information by at least one of an agent, server array controller, primary EDNS, and secondary EDNS.

47. The apparatus of Claim 40, wherein the performed actions further comprise enabling an EDNS disposed at one geographic location to make the load balancing determination by selecting a virtual server that is disposed at another geographic location.

48. The apparatus of Claim 40, wherein the performed actions further comprise enabling an EDNS disposed at one geographic location to employ another EDNS disposed at another geographic location to make the load balancing determination for the selected server.

49. The apparatus of Claim 40, wherein the performed actions further comprise at least one of a plurality of load balancing determinations, including selecting the virtual server based on hop counts between the selected virtual server and a local DNS for the client, selecting the virtual server based on round trip times between the selected virtual server and the local DNS for the client, and selecting the virtual server based on a topology of the network.

50. An apparatus for balancing a load on a plurality of virtual servers that provide access to a resource associated with a domain name, comprising:

(a) a memory for storing logical instructions;

(b) a transceiver for communicating over a network;

(c) a processor for executing the logical instructions stored in the memory, the execution of the logical instructions causing actions to be performed, including:

(i) receiving a request from a client for access to a resource associated with the domain name;

(ii) collecting metric information related to communication between at least one local DNS that is associated with the client and at least one of the plurality of virtual servers, wherein the metric information is employable for determining the load on at least one of the plurality of virtual servers;

(iii) determining the load for each of a plurality of virtual servers that provide access to the resource associated with the domain name and selecting one of the plurality of virtual servers to provide the access, the selection of the virtual server being based on a determination for balancing the load on the plurality of virtual servers; and

(iv) resolving an Internet protocol (IP) address of the selected virtual server, wherein a subsequent accessing of the resource associated with the domain name at the resolved IP address of the selected virtual server by the client will cause the load to be balanced on the plurality of virtual servers.

51. The apparatus of Claim 50, wherein at least a part of the collected metric information is employable in the determination of the selected virtual server for balancing the load on the plurality of virtual servers.

52. The apparatus of Claim 50, wherein the collected metric information is employed for balancing the load on the plurality of virtual servers, and wherein at least one virtual server is disposed in a geographic location that is separate from another geographic location where at least another virtual server is disposed.

53. The apparatus of Claim 50, wherein the metric information further comprises at least one of a hop count, round trip time, and packet completion rate.

54. The apparatus of Claim 50, wherein the performed actions further comprise enabling an agent disposed on a node server to communicate metric information to at least one of a virtual server, server array controller, and an EDNS.

55. A system for balancing a load on a plurality of virtual servers that provide access to a resource associated with a domain name, comprising:

(a) a server array controller that balances the load on a plurality of node servers, wherein the server array controller generates each virtual server based on at least a portion of the capacity of at least one of the plurality of node servers; and

(b) an EDNS that provides for balancing the load on the plurality of virtual servers, the EDNS performs actions, including:

(i) collecting metric information related to the plurality of virtual servers, wherein the metric information is employable for determining the load on at least one of the plurality of virtual servers;

(ii) determining the load for each of the plurality of virtual servers that provide access to the resource associated with the domain name and selecting one of the plurality of virtual servers to provide the access, the selection of the virtual server being based on a determination for balancing the load on the plurality of virtual servers and including the resolved Internet protocol (IP) address of the selected virtual server; and

(iii) in response to a request from a client for access to the resource associated with the domain name, enabling the resolved IP address of the selected virtual server to be provided to the client, wherein a subsequent and separate accessing of the resource associated with the domain name at the resolved IP address of the selected virtual server by the client causes the load to be balanced on the plurality of virtual servers.

56. The system of Claim 55, wherein at least one virtual server is disposed in a geographic location that is separate from another geographic location where at least another virtual server is disposed.

57. The system of Claim 55, further comprising enabling the EDNS disposed at one geographic location to make the load balancing determination by selecting a virtual server that is disposed at another geographic location.

58. The system of Claim 55, further comprising the EDNS disposed at one geographic location to employ another EDNS disposed at another geographic location to make the load balancing determination for the selected server.

59. An agent for balancing a load on a plurality of virtual servers that provide access to a resource associated with a domain name, wherein the agent performs actions, comprising:

(a) collecting metric information related to at least one of the plurality of virtual servers, wherein the metric information is employable for determining the load on at least one of the plurality of virtual servers;

(b) providing the metric information to an EDNS,

(c) enabling the EDNS to employ the metric information to determine the load for each of the plurality of virtual servers that provide access to the resource associated with the domain name and select one of the plurality of virtual servers to provide the access, the selection of the virtual server being based on a determination for balancing the load on the plurality of virtual servers and including the resolved Internet protocol (IP) address of the selected virtual server; and

(d) in response to a request from a client to access the resource associated with the domain name, enabling the EDNS to provide the resolved IP address of the selected virtual server, and wherein a subsequent and separate accessing of the resource associated with the domain name at the resolved IP address of the selected virtual server by the client causes the load to be balanced on the plurality of virtual servers.

60. An apparatus for balancing a load on a plurality of virtual servers that provide access to a resource associated with a domain name, comprising:

(a) means for receiving a request from a client for access to a resource associated with the domain name;

(b) means for collecting metric information related to communication between at least one local DNS that is associated with the client and at least one of the plurality of virtual servers, wherein the metric information is employable for determining the load on at least one of the plurality of virtual servers;

(c) means for determining the load for each of a plurality of virtual servers that provide access to the resource associated with the domain name and selecting one of the plurality of virtual servers to provide the access, the selection of the virtual server being based on a determination for balancing the load on the plurality of virtual servers; and

(d) means for resolving an Internet protocol (IP) address of the selected virtual server, wherein a subsequent accessing of the resource associated with the domain name

at the resolved IP address of the selected virtual server by the client will cause the load to be balanced on the plurality of virtual servers.--